

IN THE CLAIMS

Claims 68, 69, 72, 75, 77, 78, 84, and 89 are pending in this application, wherein claims 66, 67, 70, 71, 73, 74, 76, 79-83, 85-88, and 90-119 are being canceled without prejudice or disclaimer, and wherein claims 68, 69, 72, 75, 77, 78, 84, and 89 are being amended to improve form, as follows:

1-67. (Canceled)

68. (Currently Amended) ~~[[The]]~~A magnetoresistive device according to claim 67, having a tunnel barrier junction structure, the magnetoresistive device comprising:

a tunnel barrier layer;

a first ferromagnetic material layer of a BCC structure formed on a first side of said tunnel barrier layer; and

a second ferromagnetic material layer of the BCC structure formed on a second side of said tunnel barrier layer, wherein

said tunnel barrier layer is formed by a single-crystalline MgO_x (001) ($0 < x < 1$) or a poly-crystalline MgO_x ($0 < x < 1$) in which (001) crystal plane is preferentially oriented, and

wherein ~~[[the]]~~a tunnel barrier height between a bottom of a conduction band of said tunnel barrier layer and a Fermi energy of at least one of said first and second ferromagnetic layers is a discontinuous value in ~~[[the]]~~a range of 0.2 to 0.5 eV.

69. (Currently Amended) The magnetoresistive device according to claim ~~[[67]]~~68, wherein said ferromagnetic material comprises a single-crystalline (001) of Fe or Fe-based alloy, or a poly-crystalline of Fe or Fe-based alloy in which (001) crystal plane is preferentially oriented.

70-71. (Canceled).

72. (Currently Amended) A magnetoresistive device, comprising:

a first ferromagnetic material layer of ~~[[the]]~~a BCC structure;

a second ferromagnetic material layer of the BCC structure; and
a magnesium oxide layer located between said first ferromagnetic material layer
and said second ferromagnetic material layer, wherein
said magnesium oxide is a single-crystalline (001) or a poly-crystalline
crystalline in which (001) crystal plane is preferentially oriented,[[and]]
wherein said magnesium oxide has oxygen vacancy defects, and
wherein said magnesium oxide has a tunnel barrier height in a range of 0.2 to
0.5 eV.

73-74. (Canceled).

75. (Currently Amended) The magnetoresistive device according to claim [[73]]68, wherein
a magnetoresistance ratio of said magnetoresistive device is more than 70 %.

76. (Canceled).

77. (Currently Amended) A magnetoresistive device having a magnetic tunnel junction
structure comprising:
a tunnel barrier layer;
a first ferromagnetic material layer of a BCC structure formed on a first side of
said tunnel barrier layer; and
a second ferromagnetic material layer of the BCC structure formed on a second
side of said tunnel barrier layer, wherein
said tunnel barrier layer comprises a poly-crystalline MgO in which (001)
crystal plane is preferentially oriented, said MgO having oxygen vacancy defects,
wherein said tunnel barrier layer has [[the]]a tunnel barrier height of 0.2 to 0.5
eV, and
wherein a magnetoresistance ratio of said device is more than 70 %, ~~and an~~
~~output voltage of said device is more than 200 mV at room temperature.~~

78. (Currently Amended) A magnetoresistive device having a magnetic tunnel junction structure, the magnetoresistive device comprising:
- a tunnel barrier layer;
 - a first ferromagnetic material layer of a BCC structure formed on a first side of said tunnel barrier layer; and
 - a second ferromagnetic material layer of the BCC structure formed on a second side of said tunnel barrier layer, wherein
- said tunnel barrier layer comprises a poly-crystalline magnesium oxide having oxygen vacancy defects in which (001) crystal plane is preferentially oriented,
- said tunnel barrier layer has ~~[[the]]~~ a tunnel barrier height of 0.2 to 0.5 eV, and
- a magnetoresistance ratio of said device is more than 70 %, ~~and an output voltage of said device is more than 200 mV at room temperature.~~
- 79-83. (Canceled).
84. (Currently Amended) The magnetoresistive device according to claim ~~[[83]]~~ 68, wherein said first ferromagnetic material layer comprises CoFeB alloy.
- 85-88. (Canceled).
89. (Currently Amended) A memory device comprising:
- a transistor; and
 - a magnetoresistive device comprising a tunnel barrier layer;
 - a first ferromagnetic material layer of a BCC structure formed on a first side of said tunnel barrier layer; and
 - a second ferromagnetic material layer of the BCC structure formed on a second side of said tunnel barrier layer, wherein
- said tunnel barrier layer is formed by a single-crystalline ~~[(001)]~~ MgOx (001) ($0 < x < 1$) or a poly-crystalline MgOx ($0 < x < 1$) in which (001) crystal plane is preferentially oriented, wherein

[[the]]a tunnel barrier height of said tunnel barrier layer is in [[the]]a range of
0.2 to 0.5 eV and
said magnetoresistive device is used as a load for said transistor.

90-119. (Canceled).